

ABSTRACT

A system and method for configuring and monitoring devices utilizing a power line network is provided herein. Each network device (*e.g.*, programmable logic controller, machine, or sensor) contains a power line interface to facilitate communication over a power line network. The power line interfaces contain at least one unique identifier to distinguish the interface and its associated network device from other devices on the same network and thereby enable device message exchange. The ubiquity of power lines in an industrial environment or any environment for that matter provides an accommodating medium of communication, which the subject invention exploits to set-up, configure, and program industrial control devices connected thereto.

Furthermore, the subject invention can utilize power lines after configuration, during system operation, or upon device failure to monitor, diagnose, and/or predict the health of a system device.